

Labor and Population

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Research Brief RAND Program

Contraception and Fertility in Zimbabwe

Family Planning Services and Education Make a Difference

Since achieving independence in 1980, Zimbabwe has invested heavily in its infrastructure. A large share of that investment has been allocated to the provision of social services, particularly health and education. The country's family planning program, which was integrated into the public health system in the 1980s, has expanded dramatically. Today, knowledge of contraceptives is virtually universal, and the level of use of modern methods is among the highest in sub-Saharan Africa. Still, the fertility rate in Zimbabwe remains high, and critics have charged that the family planning program is ineffective—even though there has been no systematic evaluation of the program.

The benefits of investments in social infrastructure since independence are likely to be felt most by young Zimbabweans, and thus it will be several decades before it is possible to arrive at a complete and definitive answer with regard to the benefits realized from the country's family planning services. Policy decisions, however, cannot wait decades. In a recent study, Duncan Thomas and John Maluccio combined household- and community-level survey data collected in the late 1980s and early 1990s to measure the impact of service availability and quality on contraceptive use and fertility, paying special attention to the distributional effect of these investments.

They found that the availability and quality of several dimensions of health and family planning services have had a significant and substantial impact on the use of modern contraceptives in Zimbabwe. Some of these effects are most pronounced for the most disadvantaged, suggesting the family planning programs are well-targeted. The evidence with regard to fertility, however, is mixed and likely to be confounded by issues of timing and spacing.

Controlling for access to services, education is a powerful predictor of both fertility and contraceptive use, particularly among younger women, who have benefited

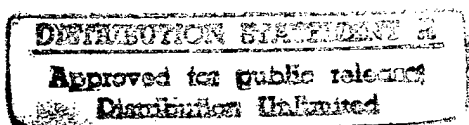
from the large increase in education opportunities since independence.

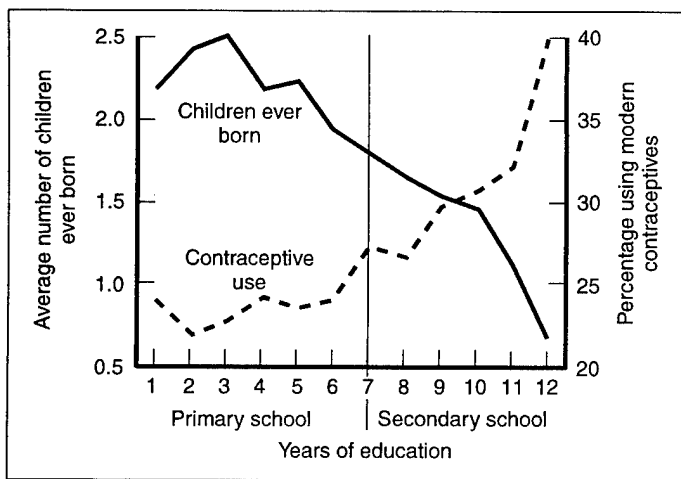
CONTRACEPTIVE USE

By combining data from four surveys, the researchers were able to characterize the availability and quality of services in a particular community in a richer way than is typically possible in any national study and certainly in a study of Southern Africa. They found that certain modes of family planning service delivery appeared to influence the use of modern contraceptive methods. For example, in communities that received visits from mobile family planning units, the probability of use of modern methods was about 4 percent higher than in those that did not receive such visits. Availability of services through a community-based distributor increased the likelihood of use by about 3 percent. When the community-based distributor was issued a bicycle or had taken a course from the Zimbabwe National Family Planning Council, the probability of current use was elevated most among less-educated women. This suggests that good training and reducing the costs of reaching less-accessible areas have had a significant benefit in terms of reaching the most disadvantaged women.

Living near a general hospital was associated with greater use of contraceptives among rural women. Use of modern methods was also associated with certain indicators of facility quality: availability of electricity, number of nurses, and supply of needles.

When other background and community characteristics are held constant, education has a positive effect on modern contraceptive use, but the effects are far from linear. As the figure shows, at low levels of education there is no clear association between education and use of contraceptives. It is only among women who have completed primary school (seven years of education) that the powerful effect of education becomes apparent. For example,





When other background characteristics are held constant, education becomes a powerful predictor of fertility and contraceptive use among women 15 to 49 years old.

women who complete secondary school (12 years or more) are about twice as likely to use modern contraceptive methods as women who do not complete primary school.

FERTILITY

The figure shows a similar pattern in the relationship between education and fertility. The negative correlation between the two is significant only among women with six or more years of schooling, and it is very large among women who complete more than 10 years of education. Relative to women who do not complete primary school, women who complete secondary school have at least one child fewer.

Very little of the relationship between education and fertility (and contraceptive use) is explained by differences in access to and quality of family planning services. Identifying the mechanisms through which education affects

demographic indicators is a key question for policy-makers. The study makes some progress on this front.

It has been suggested that the negative correlation between education and fertility simply reflects unobserved differences in women who are higher achievers. While the researchers present some evidence in support of this view, they argue that it cannot explain the magnitude of the differences by education level. Moreover, they find that the link between education and fertility is only significant among women 15 to 35 years old and that it is largely concentrated among urban women. Since these better-educated, younger women are likely to have greater labor market opportunities than their older and less well-educated peers, the researchers speculate that expanded employment opportunities may play an important role in reducing fertility in Zimbabwe.

CONCLUSIONS

The data suggest that the introduction of a general hospital, mobile family planning clinic, and community-based distributors into a previously under-served community would be associated with an increase in contraceptive prevalence of about 30 to 40 percent. It is likely that these services would have their greatest impact on less-educated (and, therefore, poorer) women. Thus, the study concludes that some elements of the Zimbabwe family planning program have been effective and are well-targeted.

Controlling for access to services, there is a strong positive association between education and contraceptive use and a negative association between education and fertility. Understanding the mechanisms that underlie these correlations is crucial in designing effective public policies. The researchers suggest that labor market opportunities and unobservable differences among women who attain different levels of education are likely to be part of the explanation.

RAND research briefs summarize studies more fully documented elsewhere. This brief describes work conducted in RAND's Labor and Population Program and at Yale University with funding from the Demographic and Health Surveys, the World Bank, the National Science Foundation, and the Yale University Center for International Studies. The preparation of this research brief was supported by a grant from the William and Flora Hewlett Foundation and by RAND's Center for the Study of the Family in Economic Development. The methodology and findings of this work are documented in Duncan Thomas and John Maluccio, "Fertility, Contraceptive Choice, and Public Policy in Zimbabwe," World Bank Economic Review, Vol. 10, No. 1, 1996, pp. 189-222, and in Living Standard Measurement Study Working Paper No. 109, The World Bank, Washington, D.C., 1995; the article is abstracted in International Family Planning Perspectives, Vol. 21, No. 3, 1995, pp. 120-121. Abstracts of RAND documents may be viewed on the World Wide Web (<http://www.rand.org>). RAND is a nonprofit institution that helps improve public policy through research and analysis; its publications do not necessarily reflect the opinions or policies of its research sponsors.

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RB-5013 (1997)